WHAT IS CLAIMED IS:

1. A mold clamping control device for use in an injection molding machine, said mold clamping control device comprising:

a first sensor detecting a relative position between a movable platen and a fixed platen to produce a detected platen position;

a second sensor detecting a mold clamping force exerted on a mold clamped by the movable platen and the fixed platen to produce a detected mold clamping force;

a target value generator generating a target value between the movable platen and the fixed platen as a target platen position value and generating a target mold clamping force value; and

a mold clamping control unit for calculating a position deviation and a mold clamping deviation, the position deviation being a deviation between the target platen position value and the detected platen position, the mold clamping deviation being a deviation between the target mold clamping force value and the detected mold clamping force, said mold clamping control unit being configured to selectively control a mold clamping motor based upon one of the position deviation and the mold clamping deviation.

2. A mold clamping control device as claimed in Claim 1, wherein said mold clamping control unit comprises:

a subtracting unit for subtracting the detected platen position and the detected mold clamping force from the target platen position value and the target mold clamping force value, respectively, to produce the position deviation and the mold clamping deviation, respectively;

a switch for use in selectively producing the position deviation and the mold clamping deviation as a selected deviation; and

a generating unit for generating a control command value for the mold clamping motor according to the selected deviation.

3. A mold clamping control device as claimed in Claim 1, wherein said mold clamping control unit comprises:

a first subtractor for subtracting the detected platen position from the target platen position value to obtain the position deviation;

a second subtractor for subtracting the detected mold clamping force from the target mold clamping force value to obtain the mold clamping deviation;

a platen position compensation unit for use in converting the position deviation into a first control command value for the motor;

a mold clamping force compensation unit for use in converting the mold clamping deviation into a second control command value for the motor; and

switch for use in selectively supplying the first and the second control command values for the motor to the mold clamping motor.

4. A mold clamping control device as claimed in Claim 1, wherein said mold clamping control unit comprises:

a first subtractor for subtracting the detected platen position from the target platen position value to obtain the position deviation;

a second subtractor for subtracting the detected mold clamping force from the target mold clamping force value to obtain the mold clamping deviation;

a switch for use in selectively producing, as a selected deviation, the position deviation and the mold clamping deviation; and

a platen position and mold clamping force compensation unit for use in converting the selected deviation into a control command value for the motor to supply it to the mold clamping motor.

5. A mold clamping control device as claimed in Claim 1, wherein said mold clamping control unit comprises:

a target value switch for use in selectively producing, as a selected target value, the target platen position value and the target mold clamping force value;

a detected value switch for use in selectively producing, as a selected detected value, the detected platen position and the detected mold clamping force, said detected value switch being in cooperation with said target value switch;

a subtractor for subtracting the selected detected value from the selected target value to obtain a deviation; and

a platen position and mold clamping force compensation unit for use in converting the deviation into a control command value for the motor to supply the control command value to the mold clamping motor.

6. A mold clamping control device as claimed in Claim 2, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which is corresponding to the platen position is defined as a first control command value for the motor, and the control command value for the motor which is corresponding to the mold clamping force is defined as a second control command value for the motor, and wherein said mold clamping control unit produces the first control command value for the motor as a control command from the beginning of the injection of the molten resin until a certain period of time elapses and produces the second control command value for the motor as the control command after the certain period of time has elapsed, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the control command.

7. A mold clamping control device as claimed in claim 3, wherein the relative position between the movable platen and the fixed platen is a platen position, and wherein said mold clamping control unit produces the first control command value for the motor as a control command from the beginning of the injection of the molten resin until a certain period of time elapses and produces the second control command value for the motor as the control command after the certain period of time has elapsed, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the control command.

8. A mold clamping control device as claimed in Claim 4, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which is corresponding to the platen position is defined as a first control command value for the motor, and the control command value for the motor which is corresponding to the mold clamping force is defined as a second control command value for the motor, and wherein said mold clamping control unit

produces the first control command value for the motor as a control command from the beginning of the injection of the molten resin until a certain period of time elapses and produces the second control command value for the motor as the control command after the certain period of time has elapsed, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the control command.

9. A mold clamping control device as claimed in Claim 5, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which is corresponding to the platen position is defined as a first control command value for the motor, and the control command value for the motor which is corresponding to the mold clamping force is defined as a second control command value for the motor, and wherein said mold clamping control unit produces the first control command value for the motor as a control command from the beginning of the injection of the molten resin until a certain period of time elapses and produces the second control command value for the motor as the control command after the certain period of time has elapsed, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the control command.

10. A mold clamping control device as claimed in Claim 2, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which is corresponding to the platen position is defined as a first control command value for the motor, and the control command value for the motor which is corresponding to the mold clamping force is defined as a second control command value for the motor, the injection molding machine comprising a screw for injecting the molten resin, and wherein said mold clamping control unit produces the first control command value for the motor as a motor control command from a beginning of the injection of the molten resin until a position of the screw reaches a predetermined position and produces the second control command value for the motor as the motor control command after the position of the screw reaches the predetermined position, said mold clamping

control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the motor control command.

11. A mold clamping control device as recited in Claim 3, wherein the relative position between the movable platen and the fixed platen is a platen position, the injection molding machine comprising a screw for injecting the molten resin, and wherein the mold clamping control unit produces the first control command value for the motor as a motor control command from a beginning of the injection of the molten resin until a position of the screw reaches a predetermined position and produces the second control command value for the motor as the motor control command after the position of the screw reaches the predetermined position, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the motor control command.

12. A mold clamping control device as claimed in Claim 4, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which is corresponding to the platen position is defined as a first control command value for the motor, and the control command value for the motor which is corresponding to the mold clamping force is defined as a second control command value for the motor, the injection molding machine comprising a screw for injecting the molten resin, and wherein said mold clamping control unit produces the first control command value for the motor as a motor control command from a beginning of the injection of the molten resin until a position of the screw reaches a predetermined position and produces the second control command value for the motor as the motor control command after the position of the screw reaches the predetermined position, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the motor control command.

13. A mold clamping control device as claimed in Claim 5, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which is corresponding to the platen position is defined as a first control command value for the motor, and the control command value for the motor which is

corresponding to the mold clamping force is defined as a second control command value for the motor, the injection molding machine comprising a screw for injecting the molten resin, and wherein said mold clamping control unit produces the first control command value for the motor as a motor control command from a beginning of the injection of the molten resin until a position of the screw reaches a predetermined position and produces the second control command value for the motor as the motor control command after the position of the screw reaches the predetermined position, said mold clamping control device further comprising a motor control unit for drivingly controlling the mold clamping motor according to the motor control command.

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14. A method for controlling mold clamping in an injection molding machine, said method comprising the steps of:

detecting a relative position between a movable platen and a fixed platen to produce a detected platen position;

detecting a mold clamping force exerted on a mold clamped by the movable platen and the fixed platen to produce a detected mold clamping force;

generating a target value between the movable platen and the fixed platen as a target platen position value for generating a target mold clamping force value;

calculating a position deviation and a mold clamping deviation, the position deviation being a deviation between the target platen position value and the detected platen position, the mold clamping deviation being a deviation between the target mold clamping force value and the detected mold clamping force value; and

selectively controlling a mold clamping motor based upon one of the position deviation and the mold clamping deviation.

15. A method for controlling mold clamping as claimed in Claim 14, said method further comprising:

subtracting the detected platen position and the detected mold clamping force from the target platen position value and the target mold clamping force value, respectively, to produce the position deviation and the mold clamping deviation, respectively;

selectively producing the position deviation and the mold clamping deviation as a selected deviation; and

generating a control command value for the mold clamping motor according to the selected deviation.

16. A method for controlling mold clamping as recited in Claim 14, said method further comprising the steps of:

subtracting the detected platen position from the target platen position to obtain the position deviation;

subtracting the detected mold clamping force from the target mold clamping force to obtain the mold clamping deviation;

converting the position deviation into a first control command value for the motor; converting the mold clamping deviation into a second control command value for the motor; and

selectively supplying the first and second control command values for the motor to the mold clamping motor.

17. A method for controlling mold clamping as recited in Claim 14, said method comprising the steps of:

subtracting the detected platen position from the target platen position to obtain the position deviation;

subtracting the detected mold clamping force from the target mold clamping force to obtain the mold clamping deviation;

selectively producing the position deviation and the mold clamping deviation as a selected deviation; and

converting the selected deviation into a control command value for the motor to supply the control command value to the mold clamping motor.

18. A method for controlling mold clamping as recited in Claim 14, said method further comprising the steps of:

selectively producing, as a selected target value, the target platen position value and the target mold clamping force value;

selectively producing, as a selected detected value, the detected platen position and the detected mold clamping force;

subtracting the selected detected value from the selected target value to obtain a deviation; and

converting the deviation into a control command value for the motor to supply the control command value to the mold clamping motor.

19. A method as recited in claim 15, wherein the relative position between the movable platen and the fixed platen is a platen position, wherein the control command value for the mold clamping motor corresponding to the platen position is defined as a first control command for the motor, and the control command value for the motor which corresponds to the mold clamping force is defined as a second control command value for the motor, said method further comprising the steps of:

producing the first control command value for the motor as a control command from a beginning of the injection of the molten resin until a certain period of time elapses, and producing the second control command value for the motor as the control command after the certain period of time has elapsed; and

drivingly controlling the mold clamping motor according to the control command.

20. A method as recited in claim 16, wherein the relative position between the movable platen and the fixed platen is a platen position, said method further comprising the steps of:

producing the first control command value for the motor as a control command from the beginning of the injection of the molten resin until a certain period of time elapses;

producing the second control command value for the motor as the control command after the certain period of time has elapsed; and

drivingly controlling the mold clamping motor according to the control command.

21. A method as recited in claim 17, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor which corresponds to the platen position is defined as a first control command value for the motor, and wherein the control command value for the motor which corresponds to the mold clamping force is defined as a second control command value for the motor, said method further comprising the steps of:

producing the first control command value for the motor as a control command from the beginning of the injection of the molten resin until a certain period of time elapses;

producing the second control command value for the motor as the control command after the certain period of time has elapsed; and

drivingly controlling the mold clamping motor according to the control command.

22. A method as recited in claim 18, wherein a relative position between the movable platen and the fixed platen is a platen position, the control command for the motor which corresponds to the platen position is defined as a first control command value for the motor, and wherein the control command value for the motor which corresponds to the mold clamping force is defined as a second control command value for the motor, said method further comprising the steps of:

producing the first control command value for the motor as a control command from the beginning of the injection of the molten resin until a certain period of time elapses;

producing the second control command value for the motor as the control command after the certain period of time has elapsed; and

drivingly controlling the mold clamping motor according to the control command.

23. A method as recited in claim 15, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor corresponding to the platen position is defined as a first control command value for the motor, and wherein the control command for the motor which corresponds to the mold clamping force is defined as a second control command value for the motor, said method further comprising the steps of:

producing the first control command value for the motor as a motor control command from a beginning of injection of the molten resin until a position of an injection screw reaches a predetermined position;

producing the second control command value for the motor as the motor control command after the position of the injection screw reaches the predetermined position; and

drivingly controlling the mold clamping motor according to the motor control command.

24. A method as recited in claim 16, wherein the relative position between the movable platen and the fixed platen is a platen position, said method further comprising the steps of:

producing the first control command value for the motor as a motor control command from a beginning of injection of the molten resin until a position of an injection screw reaches a predetermined position;

producing the second control command value for the motor as the motor control command after the position of the injection screw reaches the predetermined position; and

drivingly controlling the mold clamping motor according to the motor control command.

25. A method as recited in claim 17, wherein the relative position between the movable platen and the fixed platen is a platen position, the control command value for the motor corresponding to the platen position is defined as a first control command value for the motor, and wherein the control command value for the motor corresponding to the mold clamping force is defined as a second control command value for the motor, said method further comprising the steps of:

producing the first control command value for the motor as a motor control command from a beginning of injection of the molten resin until a position of an injection screw reaches a predetermined position;

producing the second control command value for the motor as the motor control command after the position of the injection screw reaches the predetermined position; and

drivingly controlling the mold clamping motor according to the motor control command.

26. A method as recited in claim 18, wherein the relative position between the movable platen and the fixed platen is a platen position, the

control command value for the motor corresponding to the platen position is defined as a first control command for the motor, and wherein the control command value for the motor which corresponds to the mold clamping force is defined as a second control command value for the motor, said method further comprising the steps of:

producing the first control command value for the motor as a motor control command from a beginning of injection of the molten resin until a position of an injection screw reaches a predetermined position;

producing the second control command value for the motor as the motor control command after the position of the injection screw reaches the predetermined position; and

drivingly controlling the mold clamping motor according to the motor control command.